

Impressions of Agriculture:  
Using Semiotics to Decode Agricultural Images

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# CHAPTER 1

## INTRODUCTION

How do people view agriculture? This is a question that has many answers. These answers have changed, and will continue to change over time. However, this question is important to answer, because the way people view agriculture can affect things like how they buy, where they buy from, and how they vote on legislation involving agriculture. For those in agriculture to be able to market themselves and their products effectively, this question needs to be answered. It is particularly important to agricultural communicators as well, because as a profession, it is their job to communicate with the public to help them understand the industry. Learning what impressions and stereotypes people associate with agriculture should help communicators do this job more effectively. “It is imperative as communicators that we continue to study how rural cultures are portrayed in the media” (Rhoades & Irani, 2005, p12).

The average person in the United States doesn’t have much exposure to agriculture in their lifetime. Perceptions of rural America tend to be positive (Kellogg, 2005), but since less people are needed to do the work many people used to do, there are less and less people directly involved with an agricultural industry. In 1900, 41% of the workforce in the U.S. was employed in agriculture. In 1945, that number had dropped to 16%, and in 2000 it was just under 2% (Dmitri et al., 2005). During that same time period, the U.S. population has more than tripled, from 76 million to 281 million (U.S. Census Bureau). Although this shows that agricultural practices have become increasingly more efficient to meet the growing population while using less people, it also indicates that there are progressively less people directly involved in an agricultural industry each year. Less involvement leads

to lower exposure to the industry for the average person, and less knowledge of agricultural practices.

In addition to this, only 20% of the U.S. population was recorded as living in a rural area in 2000 (U.S. Census Bureau). Living in a rural area increases the likelihood that a person will be exposed to agriculture, but these numbers show that this isn't a reality for most people in the United States. This lack of knowledge of and exposure to agriculture has the potential to be detrimental to those involved in the industry, since it creates a widening gap between producers and consumers (Goodwin, et al., 2011). Legislation and policy involving farming practices are on the ballot with increasing frequency, and everyone has the opportunity to cast their vote, regardless of their agricultural literacy.

Agricultural literacy ties in directly with these ideas. The National Research Council (1988) defines being agriculturally literate as understanding the history of agriculture and its current economic, social, and environmental impact. Many studies have shown that the general public does not have accurate knowledge or perceptions of agriculture though (National Research Council, 1988; Duncan & Broyles, 2006). As more people become suburbanized, it seems individuals are becoming less knowledgeable about agriculture (Duncan & Broyles, 2006). If people have inaccurate impressions or stereotypes of agriculture, they may make decisions based on those inaccuracies that could impact the lives of many.

A 2004 study done by Peissig on the 'Got Milk?' campaign displays the idea of low agricultural literacy leading to negative impacts for the industry. This was one of the largest agricultural promotions campaigns in history, but ended up being used by special interest groups to create parodies negatively targeting the dairy industry (Peissig, 2004).

Peissig suggests the reason for this was a lack of accurate public knowledge about the industry. Both the 'Got Milk?' campaign and parodies of relied heavily on images, which may have influenced consumer impressions or stereotypes.

Since most consumers are generations removed from a farm (American Farm Bureau, 2007), public perceptions of agriculture no longer correspond with the realities of agriculture (Goodwin & Rhoades, 2011). Recent efforts to bridge this gap show an effort to relating food to the farmer who grew it. For example, the American Farm Bureau website has an interactive map where viewers can click on a state to watch a video about a farmer in that area. The American Farm Bureau Foundation for Agriculture also added the Agricultural Literacy program in 1998 in response to the low public knowledge of agriculture as well.

### **Significance and Purpose of the Study**

The purpose of this study was to discover stereotypes and impressions people associate with agriculture. One important way people communicate and interpret the world around them is through images. Images play an important role in society because of the positive and negative messages they portray (Rhoades & Irani, 2008). This study will focus on images and what information can be gained from analyzing them. Images are often seen as direct copies of reality (Messaris, 1997), which can have a huge influence on perception. The images involved will be analyzed through the framework of semiotics. This study will also explore what influence background and previous exposure to agriculture has on consumer impressions.

Knowledge of impressions and stereotypes associated with agriculture should aid those in the agricultural industry, especially agricultural communicators, in better communicating with the public. The goals of agricultural communicators include representing agriculture well, and moving toward a mutual understanding between producers and consumers. The preconceived notions consumers have can greatly influence their understanding of agricultural practices and, in turn, their buying and voting habits. Having knowledge of consumer impressions will allow agricultural communicators to either reinforce or challenge those impressions to move closer to a mutual understanding. The information that will be gained in this study is vital to increasing effective communication from those in the agriculture industry to consumers.

### **Objectives of the Study**

The initial purpose of this study was to gain knowledge regarding consumer impressions and stereotypes of agriculture. After further review of literature and development of methods, more specific goals were created to guide the process of the study. These objectives are:

1. Discover what images people associate with agriculture
2. Find out if background and previous exposure to agriculture are related to these images
3. Analyze this information to explore impressions and stereotypes people associate with agriculture

## CHAPTER II

### REVIEW OF THE LITERATURE

In order to ensure a thorough understanding of key subject areas, a review of relevant literature was conducted in the following areas: The Influence of Images, Impressions of Agriculture, Stereotypes in Media, and Semiotics as a Theoretical Framework. The following literature review is structured by these categories.

#### **The Influence of Images**

Images have the power to create and reinforce stereotypes. Since pictures affect viewers emotionally, these stereotypes can take on the weight of established fact and remain with people for long periods of time (Lester, 1995). One of the many functions of the brain is to categorize visual information into units so that it can be quickly analyzed (Lester, 1995). These images may be categorized accurately or inaccurately, and filed away without realizing it. "I am convinced that most of us are visually illiterate and we miss completely the valuable, rich, documented sources of personal and interpersonal information that is caught and fixed in photographs" (Akeret, 1973, p4).

Since images can have such a huge impact on impressions, there is a need to complete research on the subject of images people associate with agriculture. As stated, gaining knowledge of the relationship between images and impressions of agriculture could allow consumers and producers to communicate more effectively. Advertising is an example of an area in which images have a significant impact. Advertising is a pervasive and natural part of life (Berger, et al., 1987). Images in advertising can establish implicit connections between images and ideas and elicit emotions by simulating the appearance of

an object (Messaris, 1997). Using theories (such as semiotics) to analyze images helps people understand and evaluate advertisements (Berger et al., 1987).

These same concepts that are applied to advertisements can be used to interpret personal images as well. The application of analyzing images can be used to create understanding for people from different backgrounds, due to their ability to imitate a direct encounter with people and places (Messaris, 1997). The best way to learn to analyze photos is through example and experience (Akeret, 1973), so analysis of previous similar studies done was beneficial in this research (Goodwin & Rhoades, 2011, Glaze, et al., 2010, Edgar & Rutherford, 2012).

### **Stereotypes in Media**

The media often uses generalizations in their portrayals of places, or groups of people, and these generalizations can become shortcuts that convey certain messages about the places or people involved (Lundstrom, 2002). Even in situations where advertisers do not set out to influence an audience's impressions on a specific topic, such as agriculture, they can still have an effect on viewers (Bandura, 1986). The way agricultural communicators display agriculture in media can have a big impact on public perception. Lester emphasizes the relationship between pictures and stereotypes by quoting writer Walter Lippmann, writing, "Whether right or wrong...imagination is shaped by the pictures seen...consequently, they can lead to stereotypes that are hard to shake" (Lester, 1995, p100).

Stereotypical portrayals are so common in media that producers and consumers often fail to recognize them. As stated, pictures affect viewers on an emotional level, which

can lead to stereotypes becoming perceptions that have the weight of established fact (Lester, 1995). Pictures are often used in media and can intentionally or inadvertently perpetuate or create stereotypes. “Stereotype coverage always rewards the exceptional and ignores the ordinary” (Lester, 1995, p102). This statement underscores how easily the media can misconstrue something. Since the media focuses on the exceptional, portrayals will not reflect the average or representative person of a group.

The media also has a tendency toward geographical bias (Lundstrom, 2002). Short deadlines and competition can create an effect Lundstrom (2002) calls “parachute journalism”, which means the media makes blanket stereotypes and assumptions about people from certain areas. Lundstrom cites several examples, including election coverage in Iowa. Despite the fact that the majority of the population, and therefore, voters, are located in suburban or urban areas, the main coverage is of corn and hogs (Lundstrom, 2002).

Since agriculture is displayed in the media at times, it has the potential to be stereotyped, just as all media topics. As stated, using semiotics to decode images people associate with agriculture can further our understanding of the current stereotypes and generalizations people associate with agriculture. “*What* is reported...sometimes isn’t as important as *how* it is presented” (Lester, 1995, italics added). Understanding public impressions of agriculture can aid communicators in knowing what to present, and how to present it.

## **Impressions of Agriculture**

Many studies have been done to assess public perception of agriculture. In 2000, a



study surveyed 12 states in the North Central Region of the U.S. to find out societal perceptions of agriculture. Through a telephone survey, participants were asked their level of agreement on a five-point scale to a number of questions. The questions were designed to fit five themes: impact of agriculture on local economy, farmer interaction with the environment, the role of farm structure on the environment, economy, and society, responsibilities of non-farm residents, and the role of government in assisting farmers (Wachenheim & Rathge, 2000). The results of this study showed that people generally thought farmers were good environmental stewards, and that they helped the economy. It showed that farm residents were more likely to have these favorable impressions than non-farm residents though (Wachenheim & Rathge, 2000).

Despite these favorable impressions, a study done by the Center for Media and Public Affairs and the W.K. Kellogg Foundation showed that the public has a stereotyped view of rural life. This study was based on a content analysis of media coverage of major print and television outlets. This study showed three main stereotypes: people associate rural life with farming, people in rural areas are impoverished or have an outdated lifestyle, and rural areas are pastoral, or a reprieve from urban areas (Kellogg Foundation, 2002). Another Kellogg study found that many people associated strong family ties and hard work with agriculture (Kellogg, 2005).

A study done in 2005 showed that rural advertisements have the tendency to play into stereotypes and dominant ideologies. This study used semiotics to analyze a 2004-2005 advertising campaign for Tractor Supply Company. The results of the study showed that the campaign played into the romanticized idea of farmers leading an ideal lifestyle (Rhoades & Irani, 2005). The campaign also largely displayed farmers as middle-aged

white males, and reinforced the idea of a subordinate farm wife who supports her husband (Rhoades & Irani, 2005). This study not only displays more of the dominant impressions of agriculture, but also shows that some of these impressions are reinforced by agricultural advertisements.

Some studies have shown a distrust of agricultural practices. For example, a recent study indicated that consumers do not perceive most common livestock housing methods to be humane (Goodwin & Rhoades, 2011). The study had participants answer questions regarding their perceptions of traditional and conventional livestock housing methods by viewing two images and to justify their reasoning. The results showed that participants didn't always have accurate perceptions of livestock housing methods, and that images and media coverage influenced their perceptions (Goodwin & Rhoades, 2011).

The widening gap between consumers and producers as a result of a decrease in rural population and involvement in agriculture has spurred a movement among many people involved in agriculture to attempt to create awareness and understanding between these parties (Goodwin, et al., 2011). Understanding perceptions of agriculture and the way audiences interpret images is vital for developing communication strategies to influence attitudes toward agricultural products and practices (Goodwin, et al., 2011).

### **Semiotics as a Theoretical Framework**

The images involved in this study will be analyzed through the theoretical framework of semiotics. Semiotics is a method of quantifying the process of images taking on meaning through the perception and interpretation of the viewer (Edgar & Rutherford, 2012). It does this through a process of visual content analysis. Semiotics involves the

study of signs, which produce, convey, and interpret messages, and codes, which in turn govern the use of messages. Visual signs help interpret messages, while codes aid in understanding what the message means (Moriarty, 2005).

Linguists like Pierce and Saussure studied the linguistic aspects of semiotics, and the theory then developed to involve the use of images (Moriarty, 2005). In semiotic theory, a sign is anything that stands for something else (Moriarty, 2005). Saussure claimed that images are a collection of signs and that those signs include both the signifier and the signified. The signifier is the image itself, and the signified is the concept it stands for. For example, if a cake with candles is depicted in an image, it would be the sign, and the idea of a birthday would be what it signified. Sign relationships identified in images can be used to add meaning and analysis to images (Edgar & Rutherford, 2012).

A sign can take on various meanings depending on the person interpreting (Rhoades & Irani, 2005). Peirce said that a sign can take on iconic, indexical, or symbolic meaning. Iconic signs look like something else, such as a photograph and the person in the photograph. Indexical signs indicate the existence of something else. Pierce uses the example of smoke indicating the existence of fire to explain this relationship. Symbolic signs stand for something else (Moriarty, 2005). Patriotic and religious symbols are common examples of this, such as when a flag represents a country or an object represents a specific religion. Through its history and customs, a society develops a system of codes, which are sets of rules for usage and behavior (Lester, 1995). There are many social, ethical, and cultural codes that govern our interpretations. Photograph meanings are combinations of a viewer's personal experiences and cultural codes (Barr, 2007).

Also related to interpreting signs is the concept of denotation and connotation, as studied by Roland Barthes, who is the most well known for bringing semiotics into the visual communications field (Evans, 1999). Denotation is the literal or obvious meaning of a sign, while connotation deals with the personal associations of a sign (Chandler, 2002). Connotation also deals more with the cultural and emotional interpretations of a sign (Evans, 1999). The first order of signification is denotation and the second order is connotation. An example of this relationship could be an image of a cow, which would be the denotative level. The connotative associations of that image could be words such as milk, farming, or rural. Connotation and denotation are especially important to studying visual communication (Moriarty, 2005).

Semiotics is one way of evaluating an image's message to determine what it portrays (Edgar & Rutherford, 2012). Semiotics is also used to provide researchers with information regarding the content of images, as well as an understanding of how an audience would interpret the image and how it would affect their perceptions (Norwood, 2005). This is an important application of semiotics for this research.

## CHAPTER III

### METHODOLOGY

Chapter 1 discussed the importance of learning how consumers view agriculture. It also discussed the trend of progressively less people being involved in an agricultural industry each year, and how this trend may affect consumer perceptions of agriculture. Impressions of agriculture can affect anything from buying habits to legislation, so it is important to know these impressions and reinforce or challenge them as needed. Chapter 2 reviewed literature in the areas of the influence of images, stereotypes in media, impressions of agriculture, and semiotics as a theoretical framework. The methods were designed based on this information, and to fulfill these objectives:

1. Discover what images people associate with agriculture
2. Find out if background and previous exposure to agriculture are related to these images
3. Analyze this information to explore impressions and stereotypes people associate with agriculture

To discover the impressions people hold in regard to agriculture, this study asked participants to take pictures of agriculture that could be analyzed for patterns. The images were paired with a background survey to explore if background and previous exposure to agriculture is related to the impressions and stereotypes people hold in regard to agriculture.

An analysis of the images and surveys will yield knowledge of what images people associate with agriculture, and if background and previous exposure to agriculture are

related to said images. It should also provide insight into what impressions and stereotypes people associate with agriculture.

### **Research Design**

This basic qualitative research included 40 disposable cameras, which were distributed to a sample of college students. Participants were asked to take at least 15 of the 27 available photos on the camera. The instructions given to participants were simply to “take pictures of agriculture.” These instructions were intentionally left vague so participants would be able to interpret what the word “agriculture” meant for themselves, without being influenced by the wording or the researchers.

A survey was also distributed with each camera. The survey began by asking for general information about age, gender, and hometown, and if the participant grew up in an area that was rural, urban, suburban, farm, etc. The survey then asked participants to describe their past experience/exposure to agriculture and to rank their knowledge and perception of agriculture on a scale of 1 to 5 (five being the highest). Next, it asked participants to describe a person they knew who is directly involved in an agricultural industry, and to choose three words they think of when they hear the word “agriculture.” Finally, the survey asked participants if they were involved in FFA, 4-H, Boy Scouts, or Girl Scouts. The questions were designed to find out participants’ level of past experience with agriculture and their perceptions of the industry and people involved with it.

Peer review brought reliability to the study, with multiple persons analyzing the photos. The survey was derived from a previous study that explored consumer perceptions

of agriculture by administering a questionnaire about specific pre-chosen images (Goodwin & Rhoades, 2011).

### **Data Collection**

The distribution of surveys and cameras was approximately half to people with low past exposure to agriculture and half to people with high past exposure. Participants were part of a convenient sample, known to one or both of the researchers. All participants were between the ages of 18 and 24, and students at The Ohio State University. Approximately 39% (n=12) were male, and 61% (n=19) female. The population was recruited through responding to a flyer or by responding to a word-of-mouth invitation. Most of the participants recruited as having high exposure to agriculture had majors in the College of Food, Agricultural, and Environmental Sciences, while those recruited as having low exposure were from other colleges across the university. Many of the students in the low to medium exposure range were from an organization called Campus Crusade for Christ, which one of the researchers also belongs to. The participants had approximately one week to fill up the camera, fill out the survey, and return both to one of the researchers. The cameras were distributed during early to mid-April.

### **Analysis of Data**

After the pictures were developed, they were analyzed according to semiotics. First, signs were identified in the images. Next, the signs were analyzed for what they signify, and then analyzed in relation to other photographs. The signs were also analyzed for denotative and connotative indicators. Connotative values consist of positive, negative, and neutral,

which were determined by the information collected in the survey for that person. The researcher used denotation to assign three themes to each participant's set of photos based on these signs. This number was chosen because when analyzing the images, it seemed that there were at least three clearly present themes in each set. From this analysis, patterns of impressions or stereotypes that were signified in the photographs were found. Last, the images and themes of each participant were examined in conjunction with that person's survey to see if patterns emerged based on the background information included in the survey, and to see if there was a relationship between the images and past exposure to agriculture. This method is supported by previous studies in the literature (Rhoades & Irani, 2005).

### **Limitations of the Study**

Interpretation of images using semiotics is a fairly subjective process. It is recognized that the codes in the images have the potential to be decoded differently depending on the person decoding them (Berger et al., 1987). Just as culture and background influence what images people took, culture and background influenced the researchers in interpretation as well. For example, the author of this study grew up on a grain farm in rural northwest Ohio, was very involved in The National FFA Organization, and majored in Agricultural Communications. This could cause bias, since this background has caused the researcher to have specific opinions and associations regarding agriculture, including a very positive view of the industry.

Further limitations include a population that was known to the researcher, which has the potential to be less valid than an entirely random sample, as well as a fairly small



number of participants. At the end of the collection images were analyzed to see if more cameras needed to be distributed. It was determined that saturation was reached and no other participants were selected.

Another limitation of this study was the varying degrees of access participants had to rural areas or farms. Although all participants currently reside in Columbus, Ohio, many were able to travel to their hometowns to take pictures. Participants from the city may have wanted to take a picture of a certain animal or plant they associate with agriculture, but did not have access to it. Participants may have also been influenced by the images other participants were taking since many of them knew each other and had opportunities to discuss the project. The findings of this study cannot be generalized past this population, but it does shed light on how people view agriculture, and how background affects their perceptions.

## CHAPTER IV

### FINDINGS

This chapter presents the findings of the study, which explored the impressions of agriculture in a group of college students. Each participant took pictures of “agriculture” and filled out a survey on their previous exposure to agriculture. The information gained from the images and surveys was analyzed in the framework of semiotics. This study sought to fulfill three objectives:

1. Discover what images people associate with agriculture
2. Find out if background and previous exposure to agriculture are related to these images
3. Analyze this information to explore impressions and stereotypes people associate with agriculture

### **Demographics**

The researcher received back 31 of the original 40 cameras. Of those 31 participants, 61.3% (n=19) were female, and 38.7% (n=12) were male. Participants’ majors were varied, with 12 participants having majors in the College of Food, Agricultural and Environmental Sciences. The others had majors ranging from Chemistry to Arabic to Social Work. All but four participants were from Ohio, and the Ohio participants were from all over the state. As far as location, 35.5% (n=11) grew up in a suburban area, 61.3% (n=19) grew up in a rural area, and 3.2% (n=1) grew up in an urban area. All currently live in the urban area of Columbus though. Approximately 30% (n=10) of the participants grew up on

a farm. As can be seen, the sample had a mix of genders and majors. The participants were mostly from a rural or suburban area, but all are currently residing in an urban area.

### **Objective 1: Images Associated with Agriculture**

To fulfill this objective, each of the 31 participants took 10-25 pictures of whatever they considered to be “agriculture.” A total of 747 images were collected. Three themes were applied to each participant’s images, to consolidate the images into a more manageable framework. Overall, common themes were animals, food, and nature. Approximately 11.9% (n=89) of the photos had an animal or multiple animals in them, and nearly 11.5% (n=86) of the images had food products in them. Images depicting nature included two types of photos. One type was images of open spaces, such as fields. The other type was images of grass, trees, or other plants (not including crops). Open spaces images totaled 20.6% (n=154) and grass/tree images totaled 11.2% (n=84) for a total of 31.8% (n=238) nature-related images. If a person had one of these types of images, they usually had multiples, creating that theme within their image set. For example, one participant took all of her photos of grass and trees. Several participants drove around in a car taking pictures of the landscape. Another took all of his pictures at a dairy farm, with over half including pictures of cows. Repeated content in a person’s images governed the application of themes.

There were varying themes depending on whether the participant had had a higher or lower exposure to agriculture. Determining whether a participant should be considered “high exposure” or “low exposure” was based on a self ranking and a written response explaining their past experience with agriculture. Some participants were also labeled as

“medium exposure,” but there was usually a stronger trend in the differences between the high and low ends of the spectrum.

In participants with a higher exposure to agriculture, images depicting day-to-day items or activities were more common. Examples of this are pictures of muddy boots beside a door, a pair of boys slicing potatoes to be planted.



The images of high-exposure participants also had more people and machinery in them. There were very few pictures depicting humans overall, but nearly all that did were from high-exposure participants.



Images for lower exposure participants related a lot more to nature. The majority of the images depicting grass, trees, and open spaces belonged to low-exposure participants.



Overall, it seemed that high-exposure participants featured more “lifestyle” pictures, and objects in their natural setting. There were also more pictures relating to production, such as animals, machinery, or people actually performing a task. Low-exposure participants took more pictures of grass, trees, and other plants. There also seemed to be a tendency toward more finished products. For example, there were a lot of images of items that would be bought from a store, or even images actually taken in stores.

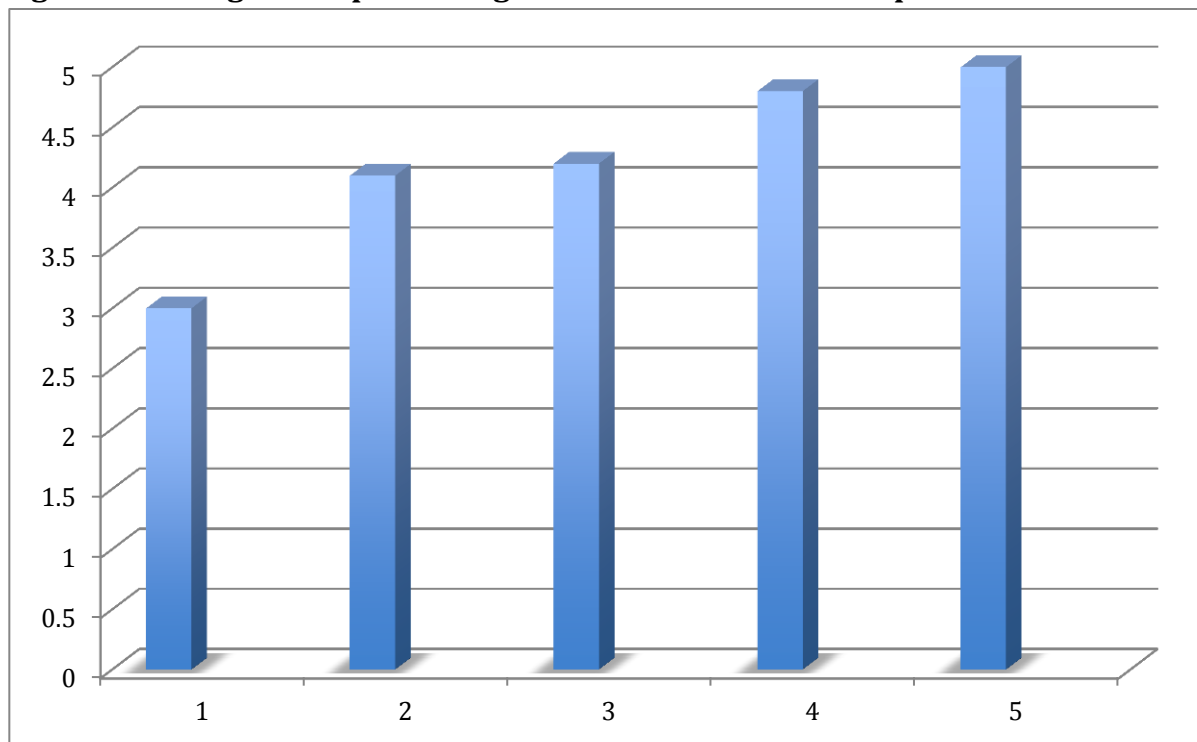


## **Objective 2: Background and Previous Exposure**

To fulfill this objective, a survey was handed out to each participant, detailing their past experience with agriculture, and some of their associations with agriculture.

Participants ranked their experience with agriculture on a scale of 1 to 5, with 5 being the highest. They did the same ranking with their perception of agriculture. A correlation occurred when analyzing these two responses simultaneously. As can be seen in Figure 1, a higher exposure to agriculture correlated to a more positive perception.

**Figure 1: Average Perception of Agriculture Based on Past Exposure**



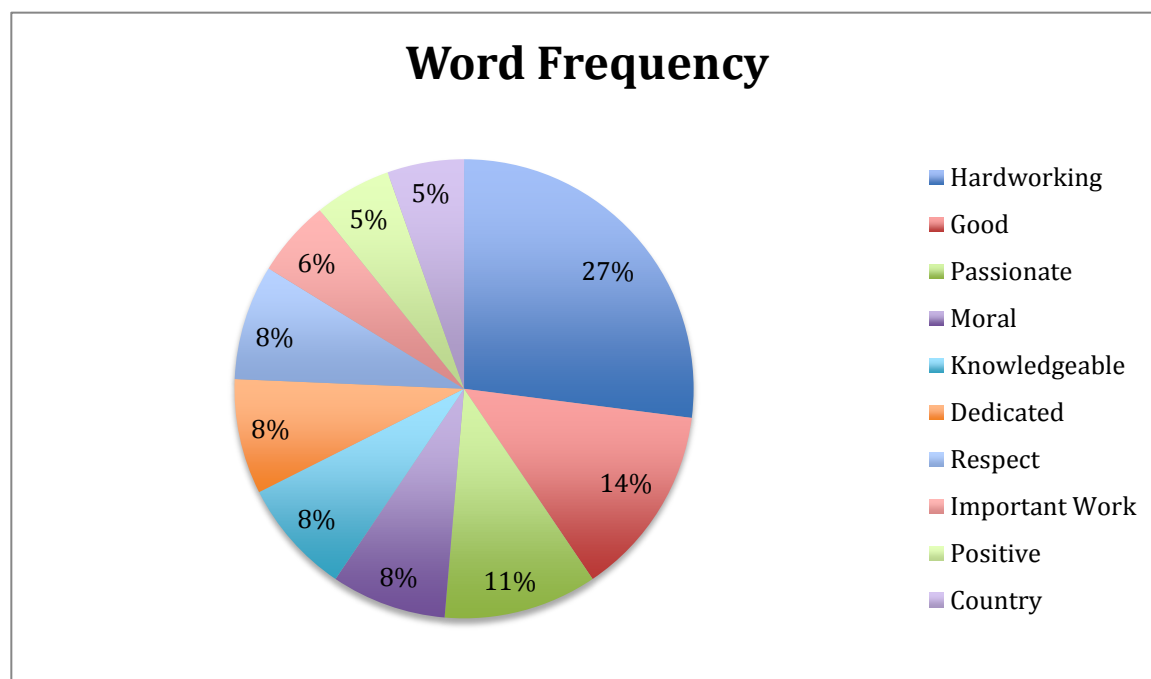
**X-Axis: Perception, Y-Axis: Exposure**

Another question on the survey asked participants to name people they know who are directly involved in an agricultural industry, and to describe their perception of that person. A variety of words were used, but several trends emerged. The most common words had to do with the person being hardworking, having a high moral standard, or being passionate or dedicated. These words all have positive connotations.



Several of the less common descriptions were more concerned with the productivity of the person. These descriptions included phrases like “not economically efficient,” “productive,” and “makes kind of a good living.” There were also a few responses simply describing the person as having a fondness for “country things.” In general, the less exposure a participant had with agriculture, the more vague were their descriptions. For example, they used phrases like “he’s a good guy.” High-exposure participants had more descriptive words to offer. Examples of these words include “impactful” and “forward thinking.” Figure 2 displays the top ten words that were used to describe people.

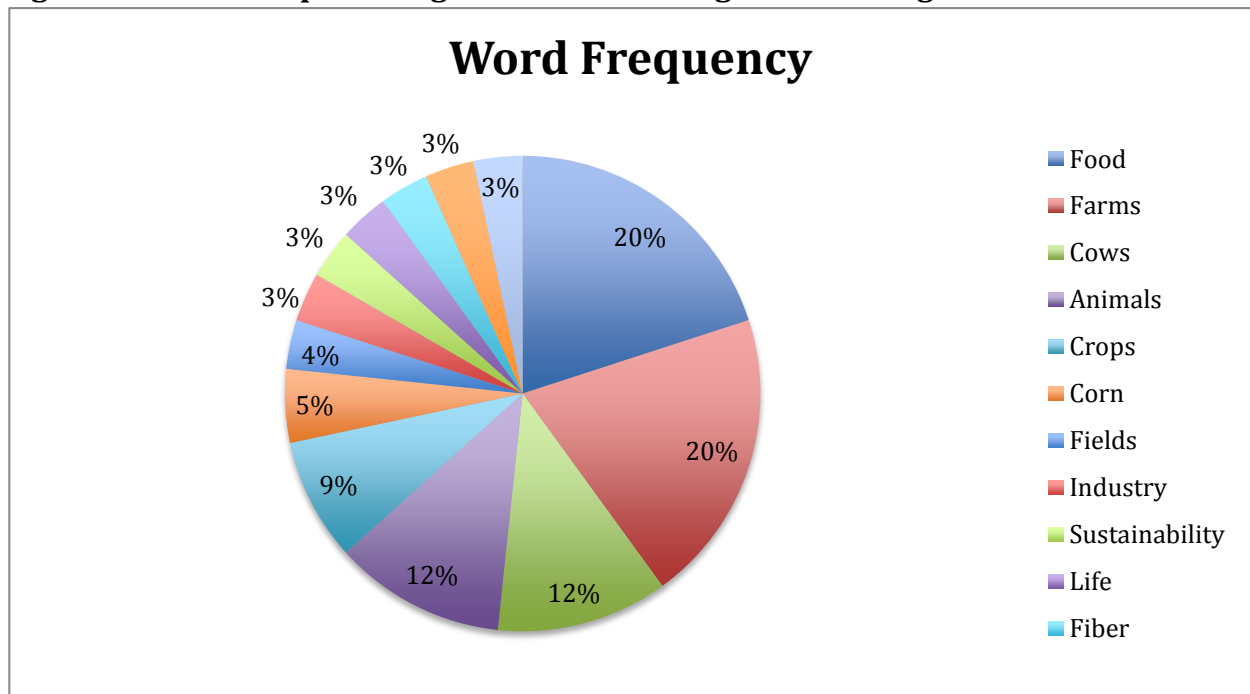
**Figure 2: Words Used to Describe People Involved in Agriculture**



The next question on the survey asked participants to list three words that come to mind when they hear the word “agriculture.” Again, words were extremely varied, but patterns were present. The most common words were “food” and “farms.” Other common

words related to animals and crops. When a specific animal or crop was named, it was always “corn” or “cows.” There were an interesting variety of less-common words as well. Several of these words were concerned with the environment, such as “sustainability,” “natural resources,” and “stewardship.” There were a few words associated with economics as well, including “subsidies” and “loans.” There were also a few words that were more abstract, such as “community,” “love,” or “responsibility.” Figure 3 shows the top 11 words used.

**Figure 3: Words People Thought of When Hearing the Word “Agriculture”**

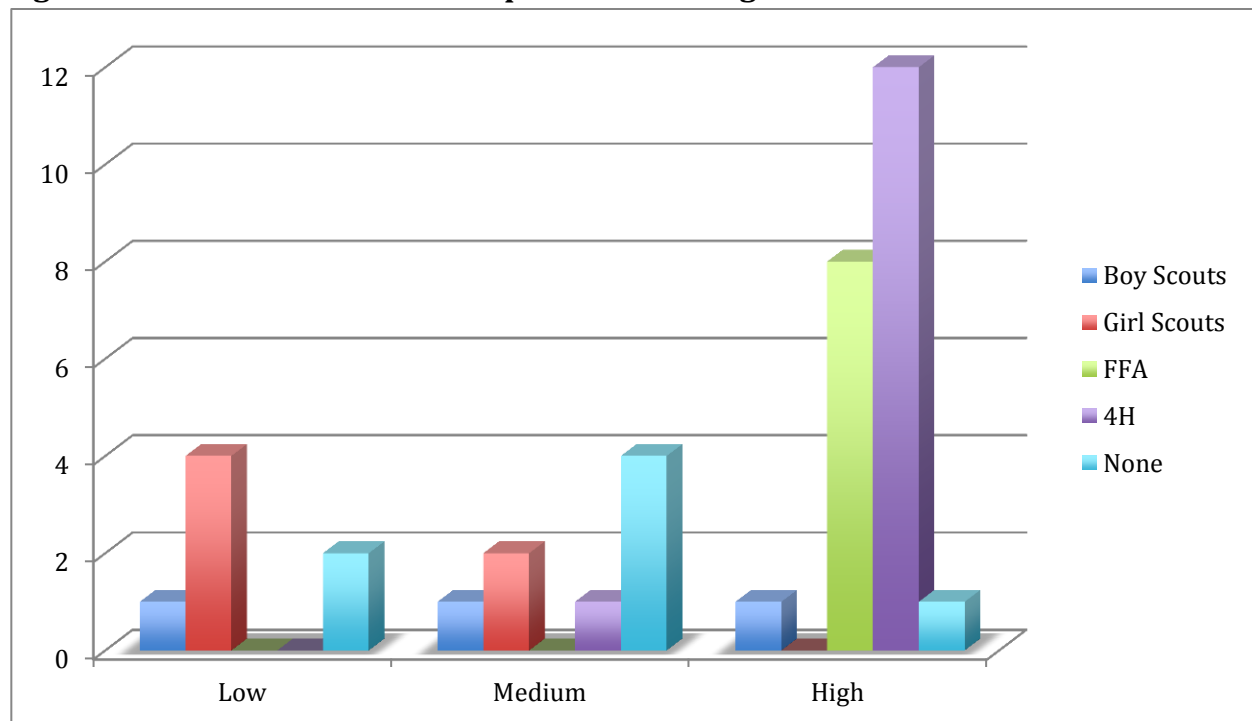


The final question on the survey asked participants to indicate whether they had ever been involved in 4-H, The National FFA Organization, and Girl Scouts or Boy Scouts. Responses indicated that 29% of participants had been involved in Boy Scouts/Girl Scouts, 42% were involved in 4-H, 25.5% were involved in FFA, and 22.5% were not involved in



any of these organizations. It seemed that people were either involved in 4H and FFA or they were involved in Boy Scouts/Girl Scouts. High exposure participants correlated with a higher involvement in 4H and FFA, while low-exposure participants correlated with a higher involvement in Boy Scouts/Girl Scouts. Figure 4 shows the distribution of responses.

**Figure 4: Past Involvement and Experience With Agriculture**



**X-Axis: Level of Experience, Y-Axis: Number of People**

### **Objective 3: Impressions of Agriculture**

The images and survey were interpreted together to determine the overall impressions the sample had of agriculture. Generally, participants appeared to have a more positive than negative view of agriculture. The words used to describe agriculture itself and the people involved in it were indicators of this. The images reflected this trend as well, depicting pretty scenes, often idyllic or natural. Images of low-exposure participants were

less likely to display dirt, especially since they were more often of products. They were much more likely to be focused on capturing something aesthetically pleasing.



Participants with a higher exposure showed more realistic images that were less idyllic and more dirty and functional.



The results of the survey also indicated that high-exposure participants were able to more specifically express their impressions and opinions about agriculture and those involved in the industry. Low-exposure participants seemed to have more vague impressions, and used more general words in their descriptions. The images reflected this trend as well. High-exposure participants took more pictures that had a distinct focal point. They were often of a specific object, animal or person. Low-exposure participants took more pictures of general scenery, and the each image encompassed a larger area.

## CHAPTER V

### SUMMARY, KEY FINDINGS AND IMPLICATIONS

#### **Purpose of the Study**

The purpose of this study is to discover stereotypes and impressions people associate with agriculture. Knowledge of impressions and stereotypes associated with agriculture should aid those in the agricultural industry, especially agricultural communicators, in better communicating with the public. Having knowledge of consumer impressions will allow agricultural communicators to either reinforce or challenge those impressions to move closer to a mutual understanding.

#### **Objectives**

Reviewing the literature revealed a need to for research to explore the images people associate with agriculture, and impressions of agriculture based on these images.

Objectives were formed to meet these needs, including:

1. Discover what images people associate with agriculture
2. Find out if background and previous exposure to agriculture are related to these images
3. Analyze this information to explore impressions and stereotypes people associate with agriculture

## **Analysis of Data**

Qualitative data in the form of images and surveys was collected. Signs in images were identified, analyzed in the framework of semiotics, and themes were applied to each set of images. Connotative values were discovered through the surveys. From this analysis, patterns of impressions or stereotypes that were signified in the photographs were found. The images and themes of each participant were examined in conjunction with that person's survey to see if patterns emerged based on the background information included in the survey, and to see if there was a relationship between the images and past exposure to agriculture or the words used to describe agriculture in the survey.

## **Limitations of the Study**

The subjective nature of the research limited the study. The researcher's own biases and experiences affected interpretation of the data collected, just as culture and background affected the images the participants took. Further limitations include a population that was known to the researcher, rather than a random sample.

Another limitation of this study was the varying degrees of access participants had to rural areas or farms. Although all participants currently reside in Columbus, Ohio, many were able to travel to their hometowns to take pictures. Participants from the city may have wanted to take a picture of a certain animal or plant they associate with agriculture, but did not have access to it. Participants may have also been influenced by the images other participants were taking since many of them knew each other and had opportunities to discuss the project.

## **Key Findings**

### **Objective 1: Images Associated with Agriculture**

A total of 747 images were collected from 31 participants in the study. Most of the researcher's interpretation of signs in the images was based on Pierce's explanation of symbolic meanings, as outlined by Moriarty (2005). High-exposure participants had a tendency to take "lifestyle" pictures, depicting day-to-day items or activities. Objects in images were often in their natural setting, rather than a displaced or processed object. For example, there were more images of food being grown in a field, rather than food on a counter in a house. High-exposure participant images also depicted more of the production aspects of agriculture, such as machinery, animals, and people.

Low-exposure participants displayed a tendency toward pictures of plants, such as trees or grass. There were also more images of products, such items bought at a store, or that had been processed in some way. These findings may relate back to the idea that public perceptions of agriculture no longer correspond with the realities of agriculture (Goodwin & Rhoades, 2011). Many of the images were aesthetically pleasing, or idyllic, which reinforced the findings of the Kellogg (2005) and Glaze et al. (2010) studies that participants found rural America more aesthetically pleasing.

### **Objective 2: Background and Previous Exposure**

Each participant filled out and returned a survey with their cameras. The surveys showed the trend that the higher the past experience with agriculture, the more positive the perception. This is in line with the Wachenheim and Rathge (2000) study, which

indicated farm residents were more likely to have a favorable impression than non-farm residents. Results of another question on the survey showed that participants viewed people involved in agriculture as hardworking, moral people, who are dedicated to their work. The associations with hard work are in line with the results of the 2005 Kellogg study. This question also revealed that high-exposure participants had more specific descriptions of people, while low-exposure participants had more vague descriptions.

Further survey results indicated that participants closely associated food and animals with agriculture. Participant also used words concerned with the environment, or economics. The final question on the survey showed that high-exposure participants were more likely to have been involved in 4-H or FFA, while low-exposure participants were more likely to have been involved with Boy Scouts or Girl Scouts.

### **Objective 3: Impressions of Agriculture**

Overall, participants had a positive view of agriculture. High-exposure participants had more specific views of agriculture, and displayed more associations with production. Low-exposure participants had more vague impressions, and generalized wording and images. They also associated agriculture more closely with products and nature.

### **Implications**

There are many implications for agricultural communicators and others in the agricultural industry as a result of this study. The trend of vague vs. specific impressions is one finding with important implications for the agricultural industry. The images and surveys indicated that more exposure to agriculture leads to people being able have a more

specific view of the industry. This, combined with the fact that a higher exposure to agriculture correlated with a more positive perception, show that if agricultural communicators can expose more people to the industry, they will have a more positive and specific perception.

Having a more definite perception will allow consumers to be able to explain more clearly why their perception of agriculture is positive. Although overall impressions were positive, they were not without stereotypes. The idyllic nature of many of the photos is in line with the 2002 Kellogg study, which showed people have a pastoral view of rural life. The result of the survey in which the words “cows” and “corn” were the only specific animal and crop mentioned also indicates the possibility that consumers have a stereotyped view that agriculture is limited to cows and corn. This relates back to the National Research Council (1988) finding that most people don’t have accurate knowledge or impressions of agriculture. Having more specific (and hopefully accurate) knowledge may aid in dispelling these stereotypes.

The trend for high-exposure participants to associate agriculture with production and low-exposure participants to associate it with product also has important implications for the industry. Those in the industry should strive toward a transparent process from start to finish in agriculture. Associating agriculture with products can make the process that created a product vague and mysterious. Consumers should know the work involved that it takes to make the product, and what steps are taken along the way. If consumers don’t associate the product with the process, they may take for granted the work that goes in to making the products they use and consume every day.

Agricultural practices should be able to speak for themselves to a certain extent, as far as creating a positive opinion in consumers. If consumers associate their products with the process, they will be able to make more informed opinions of agricultural practices. Agricultural communicators will have an easier job getting their messages across if consumers have accurate and informed views about the process of agriculture from start to finish. Consumers should also associate agriculture with the producers themselves. The study showed that images of high-exposure participants were much more likely to exhibit people (as opposed to animals, scenery, etc.) than low-exposure participants. Creating associations with agriculture and the people involved in the industry could improve consumer impressions. This is in line with some current efforts, such as the interactive map on the American Farm Bureau website, to bridge the gap between food and the people who grew it. Since descriptions of people involved in agriculture were pretty positive, encouraging associations of agriculture with people should in turn increase positive perceptions of the industry as a whole.

Another implication of the study comes from the results of the question regarding participant involvement in various organizations. People from urban and suburban areas were likely to be involved in Boy Scouts or Girl Scouts at some point in their life. If these organizations were to teach members some of the basic aspects of agriculture, more urban and suburban children would have more exposure to information about the industry than they are currently getting. Rather than creating organizations specifically for urban and suburban children, it could be more effective to integrate some agricultural education into organizations in which they are already involved. This corresponds with the idea that culture has an important impact on perceptions and interpretations (Barr, 2007).



Further implications of the study relate to the methods used in the research. As indicated in the literature review, images can be a powerful and influential tool. Agricultural communicators should know that while they may associate certain images with agriculture, others might have different associations. Just as images and semiotics were used to discover and interpret consumer impressions of agriculture, they can also be used in communicating impressions of agriculture to the public, like in the Rhoades & Irani (2005) study. Based on the findings of this study, images displayed in media about agriculture should have clear focal points, rather than vague images of scenery. They should also display production as well as product, and images of people. Cultivating an association of production practices and people with the agricultural industry has the potential to influence consumers to view agriculture in a positive way.

Future research should explore why stereotyped views of agriculture still exist. With widespread access to Internet and online resources, consumers have more access to learning about agriculture than ever before. Why are stereotypes maintained and what causes them? Further research should also be done on sample sizes from different demographics. A wider variety of ages or more participants from different parts of the U.S. could shed further light on the impressions people hold of agriculture.

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